CLAIMS

The invention is claimed as follows:

1. A mower deck comprising:

a top surface;

a cutting blade rotatably supported beneath the top surface;

at least one sidewall depending from the top surface to form a cutting chamber within which the blade rotates, said sidewall having a front portion and a rear portion;

a discharge opening provided in the rear portion of the sidewall; and

an insert that is removably received in the discharge opening to block the opening and enable the chamber to be selectively operated in a mulching or in at least a partial discharge mode.

2. The mower deck of Claim 1, wherein the cutting chamber extends through a circumference of approximately 360 degrees and the discharge opening extends along about 60 to about 120 degrees when the insert is removed.

3. The mower deck of Claim 1, wherein the cutting chamber is circular, and the tips of the blade are substantially equidistant from the sidewall and the insert when the insert is positioned in the discharge opening.

4. The mower deck of Claim 1, wherein the discharge opening is located on a bottom section of the rear portion.

5. The mower deck of Claim 1, wherein the discharge opening is defined by the sidewall at the rear portion extending outwardly away from the blade.

6. The mower deck of Claim 5, wherein the sidewall extends outwardly and downwardly away from the blade.

7. The mower deck of Claim 5, wherein the sidewall extends outwardly so as to be substantially parallel with the blade.

8. The mower deck of Claim 1, wherein the insert includes first and second ends and is removably attachable to the deck by holding the first end against the sidewall and by securing the second end with a fastener.

9. The mower deck of Claim 1, wherein the blade is a mulching blade.

10. The mower deck of Claim 1, wherein the blade, sidewall, opening, inserts and chamber are first such structures, and which includes a second blade, second sidewall, second opening, second insert and second chamber.

11. The mower deck of claim 10, wherein the first and second blades are oriented to be rotated in opposite directions.

12. The mower dick of Claim 10, wherein the first and second cutting chambers are staggered relative to a line running substantially parallel to a direction of travel of a lawnmower operating with the deck.

13. The mower deck of Claim 10, wherein the first and second openings are oriented to blow grass clippings in streams angled towards one another.

14. The mower deck of Claim 10, wherein the first and second inserts are substantially left and right versions of a same structure.

15. The mower deck of Claim 10, which includes a mulch ramp placed between the two chambers that directs grass cut at outer portions of the first and second blades towards inner portions thereof.

16. The mower deck of Claim 10, which includes a one-piece insert used to block openings in both the first and second chambers.

17. A mower deck comprising:

a top surface;

a cutting blade rotatably supported beneath the top surface;

at least one sidewall depending from the top surface and forming a cutting chamber within which the blade rotates, the sidewall including front and rear portions; and

an insert that is removably received in the rear portion of the sidewall to permit mulching when the insert is in place and to expose a discharge opening in the rear portion when the insert is removed.

18. The mower deck of Claim 17, wherein the insert is coupled to the sidewall via a single fastener.

19. The mower deck of Claim 17, which includes a mulch ramp positioned on an underside of the top surface, above the blade, the ramp operating to direct grass out at an outer portion of the blade towards an inner portion thereof.

20. The mower deck of Claim 17, wherein the discharge opening is oriented with respect to a rotational direction of the cutting blade to be in-line with a direction of air and grass flow caused by the rotational direction.

21. A lawnmower deck comprising:

a cutting chamber and a mulching blade disposed rotatably within the chamber, a mulch ramp disposed between a top of the chamber and the blade, the blade configured to cut material a second time when the blade carries the material against the ramp, and wherein the chamber is convertible solely via a removal of an insert to enable at least some of the clippings to exit the chamber without being carried to the ramp.

22. The lawnmower deck of Claim 21, wherein the ramp is disposed on a front half of the chamber with respect to a direction of travel of the chamber, and wherein the insert is positioned on a back half of the chamber.

23. The lawnmower deck of Claim 21, wherein the insert blocks an opening in the chamber, the opening configured to encourage a direction of a flow of air and grass exiting through the opening.

24. The lawnmower deck of Claim 23, wherein the insert blocks an opening in the chamber, the opening configured and oriented to channel air and grass towards a centerline of a lawnmower carrying the chamber with respect to a direction of travel of the lawnmower.

25. A method of manufacturing a mowing machine comprising the steps of:

providing a cutting chamber operable to trim on multiple side portions thereof, wherein the cutting chamber is convertible from a chamber that primarily mulches grass clippings to a chamber that primarily discharges grass clippings via a single action of opening an aperture in a rear portion of the chamber with respect to a direction of forward travel of the mowing machine.

26. The method of Claim 25, wherein opening the aperture includes opening a separate aperture for each of a plurality of blades positioned in the cutting chamber.

27. The method of Claim 25, wherein opening the aperture includes loosening a fastening device.

28. The method of Claim 25, which includes sizing the aperture to reduce an amount of noise escaping the chamber.

29. The method of Claim 25, which includes sizing the aperture to help to preclude rocks/particulate caught by a blade inside the chamber from exiting the chamber.

30. The method of Claim 25, which includes orienting the aperture so that clippings are blown behind the lawnmower so that the clippings can be collected by a collector trailing the lawnmower.

31. A mower deck portion comprising:

a top wall;

at least one side wall connected to the top wall, the side wall having a front portion, a rear portion and a plurality of side portions, the rear portion including a rear discharge wall defining a rear discharge opening;

a cutting chamber defined by the top wall and the side wall;

a discharge control device; and

at least one securing member which removably secures the discharge control device to the rear discharge wall, wherein a portion of the securing member has a position outside of the cutting chamber so as to facilitate installation and removal of the discharge control device.

32. The mower deck portion of Claim 31, wherein each of the side portions of the side wall have an identical or substantially identical shape.

33. The mower deck portion of Claim 31, wherein the cutting chamber is placed in a mulching mode when the discharge control device is secured to the rear discharge wall.

34. The mower deck portion of Claim 31, wherein the cutting chamber is placed in a discharge mode when the discharge control device is removed from the rear discharge wall.

35. A mowing machine operable in a mulching mode and a discharge mode, the mowing machine comprising:

a frame;

a plurality of wheels rotatably coupled to the frame;

a power unit supported by the frame;

at least one drive member operatively coupled to the power unit; and

a mower deck operatively coupled to the drive member, a portion of the mower deck having:

(a) a top wall;

(b) at least one side wall connected to the top wall, the side wall having a front portion, a rear portion and a plurality of side portions, the rear portion including a rear discharge wall defining a rear discharge opening;

(c) a cutting chamber defined by the top wall and the side wall;

a discharge control device; and

(d) at least one securing member which removably secures the discharge control device to the rear discharge wall, wherein a portion of the securing member has a position outside of the cutting chamber so as to facilitate installation and removal of the discharge control device.

36. The mowing machine of Claim 35, wherein each of the side portions of the side wall have an identical or substantially identical shape.

37. The mowing machine of Claim 35, wherein the cutting chamber is placed in a mulching mode when the discharge control device is secured to the rear discharge wall.

38. The mowing machine of Claim 35, wherein the cutting chamber is placed in a discharge mode when the discharge control device is removed from the rear discharge wall.

39. A mower deck comprising:

a top surface;

a cutting blade rotatably supported beneath the top surface;

at least one sidewall depending from the top surface to form a cutting chamber within which the blade rotates, said sidewall having a front portion and a rear portion; and

a discharge opening provided in the rear portion of the sidewall, the rear portion also including a member shaped and arranged to cooperate with grass and air momentum due to rotation of the blade to discharge clippings from the opening.